

GRANTEE EXPERIENCE REPORT

Indo-German Centre for Sustainability (IGCS)
IGCS Research Exchange, Grant Period 2024

experience report

Fatima Bravo Lara



Experience Report, IGCS Research Exchange Grants, Funding Period 2023

IGCS Grantee

Fatima Bravo Lara



Home Institute

Department of energy process engineering and conversion technologies of regenerative energies
Technische Universität Berlin, Berlin, Germany

Home Supervisor

Prof. Dr. Frank Behrendt

Host Institute

Department Of Electrical Engineering
Indian Institute of Technology IIT Madras, Chennai, India

Host Supervisor

Prof. Dr. Krishna Vasudevan

Research Topic

Air Conditioner Energy Efficiency within the New Academic Complex at IIT Madras

Focus Area

Energy

Starting/End date of the student exchange period

25/12/2023 – 05/03/2024

A promotional banner for IGCS grants. On the left, a smiling woman with long dark hair, wearing a yellow shirt and a backpack, is shown against a dark red background with a white mandala pattern behind her. On the right, the IGCS logo is at the top. Below it, the text reads: 'Grants For Students and Researchers', 'Conduct Research on sustainability topics in India or Germany', 'APPLICATION OPEN', and 'Floating deadline for the year 2024'. At the bottom right, a URL is provided: 'For more information: <https://www.igcs-chennai.org/grants/>'. At the very bottom, there are logos for funding partners: DAAD, German Science and Technology, Federal Ministry of Education and Research, RWTH Aachen University, C|A|U, and TU9.

As part of the IGCS scholarship grantees have agreed to provide an experience report to help IGCS evaluate their program. This experience report consists of two parts:

Part I: Written Testimonial

Initially, I was invited by Prof. Dr. Frank Behrendt to the IGCS Summer School 2023: "The Integration of Renewable Energies into a Power Grid – A Key Contribution towards a Carbon Neutral Society." This experience showed me the close relationship between India and Germany regarding sustainable energy and their impact on the global sphere. It also gave me the chance to connect with professors and students from different academic and cultural backgrounds. One of these professors was Prof. Dr. Krishna Vasudevan from IIT Madras. This encounter was the foundation for my later application to the research exchange. As a Master's student in Urban Management, the opportunity to do research in India was particularly interesting, considering the diverse challenges and solutions that big cities face throughout the country. Urban India, with its rapid population growth, dynamic development, and contrasting socio-economic realities, offers a complex yet fascinating case study. Coming from Mexico and studying in Germany, I found myself constantly comparing and contrasting my own country with the German and Indian models. This opportunity allowed me to examine differences and similarities in culture, urban planning, energy policies, and research methodologies, enriching my understanding of global urban dynamics.

Before heading to India, my expectations for the research exchange were primarily centered around understanding the different working and research methodologies between Germany and India. I thought I would learn about integrating renewable energy into urban planning from a technical perspective. However, my expectations were not only met but were far surpassed. I had not only work and research experience, but also a human approach to culture and life.

One of the most memorable aspects of my stay at IIT Madras was the people I met. The campus is an intercultural and interdisciplinary environment, bustling with students from all over India and many other countries. In my case, I made friends from India, Spain, Germany, Denmark, Italy, Finland, and Mexico. These friendships didn't just enrich my personal life; they also broadened my perspective on various cultural and academic aspects. Since we all had different fields of study, we often found ourselves sharing and reflecting on our experiences and knowledge, creating a unique and diverse learning environment. We would often discuss how each of us approached urban challenges, often influenced by our cultural and educational backgrounds. These conversations were not just informal exchanges but also a valuable part of my learning process. They helped me think critically about urban management practices in different global contexts.

The Summer School and the research exchange with Prof. Dr. Krishna have been instrumental in shaping my future career. They provided me with the tools to bridge the Mexican, German, and Indian contexts in terms of economic growth, urban planning, and sustainable development. This experience allowed me to connect with my Master's thesis, which focuses on Smart and Active Mobility. Although I used Mexico City as my case study, I

was able to incorporate insights from both German and Indian perspectives, as well as knowledge of energy policies and legislation. This integration was crucial to discussing carbon-neutral goals on a global scale, considering countries like Germany, India, and Mexico, and the roles they play within economic groups like the G7 and E7.

While in India, I had the chance to explore how cities are handling the shift towards renewable energy and sustainable urban planning. This was particularly interesting given India and Germany's ambitious goals for renewable energy adoption. Observing the different urban contexts within India, with their varying degrees of infrastructure and policy frameworks, gave me a comprehensive view of the challenges faced by cities attempting to implement such changes. This experience reminded me that achieving a sustainable and carbon-neutral society is not just a technical challenge but also a deeply cultural and social one, requiring a nuanced understanding of local contexts and needs.

One of the things that I treasure about my research exchange was the warm and welcoming community at IIT Madras. The most relevant example is Vijay, a colleague I had met during the Summer School. His guidance and support during my first days on campus were invaluable, helping me navigate in the new environment. Vijay's hospitality marked my stay, highlighting how crucial it is to have a local connection when entering a new country. It is these human connections that make an exchange experience truly memorable, going beyond academic learning to create bonds that last well beyond the stay.

Looking back, the entire experience has given me a unique perspective that I can apply in my future career. Working in three distinct cultural and economic contexts has equipped me with the intercultural ability to operate effectively in diverse environments. This will be a key asset in my professional journey, particularly in international settings. Whether it's in urban management, sustainable development, or policy-making, being able to draw on insights from Mexico, Germany, and India is something I am confident will set me apart.

For future research grantees, I have a few pieces of advice. Firstly, allocate enough time for your stay. I wish I had planned for a longer research stay—at least a month is necessary to acclimate, understand the context, and fully immerse yourself in the environment. It takes time to adapt to new routines, navigate the campus, and get a feel for the research community. Secondly, participating in an IGCS Summer or Winter School is incredibly helpful. It allows you to build bonds with students and professors from the host university, which will be key to making your experience enjoyable. Thanks to the Summer School, I met Prof. Dr. Krishna and colleagues like Vijay, who provided me with a warm welcome and guided me through my first days. I would also advise future grantees to embrace the cultural aspects of their stay. This experience goes beyond academic knowledge; it's an opportunity to immerse yourself in a new and rich culture. The IIT Madras campus is not only a hub of academic activity but also a stunning natural environment, home to wildlife and wonderful green spaces. Exploring the campus and the city gave me a sense of the unique blend of tradition and modernity that defines India. Taking the time to appreciate these cultural nuances will make your stay all the more rewarding.

Part II: Digital Media

Share your experience in digital media- maybe photographs, illustration, or graphics. Share them in the space below.



